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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,015	10/16/2006	Kazuyuki Kawabe	442P103	5815
42754 7590 06/23/2009 Nields, Lemack & Frame, LLC 176 E. Main Street Suite #5 Westborough, MA 01581				
EXAMINER				
JACKSON, MONIQUE R				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
06/23/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/591,015

Applicant(s)

KAWABE, KAZUYUKI

Examiner

Monique R. Jackson

Art Unit

1794

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7,9-15 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7,9-15 and 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/S508)
- Paper No(s)/Mail Date 3/5/09
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/5/09 has been entered.
2. The amendment filed 6/5/09 has been entered. Claims 8 and 16 have been canceled. Claims 7, 9-15, and 17-20 are pending in the application. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claims 7, 9-13, 15, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Isozaki et al (JP 2003-307623A) for the reasons recited in the prior office action and restated below, wherein the Examiner takes the position that the 1-30% of layered inorganic material taught by Isozaki et al does not appear to affect the "basis and novel characteristics" of the claimed polarizer.
4. Isozaki et al teach a polarizing plate having excellent moisture and heat resistance by forming an adhesive layer having excellent waterproof property between a polyvinylalcohol polarizing film and a cellulose acetate protective film (Abstract.) Isozaki et al teach that in producing the polyvinylalcohol polarizing film, a fixing process is performed to strengthen adsorption of the color of the film wherein boric acid and/or a boron compound are added in the treatment bath used for the fixing process (Paragraph 0026-0027.) Isozaki et al teach that the polarizing plate is produced by bonding the cellulose acetate protective film to at least one side

of the polyvinylalcohol polarizing film via a layer of water-based adhesive wherein the adhesive composition comprises a polyvinylalcohol polymer, an inorganic layered compound, and a crosslinking agent in an amount of preferably 0.5% to 50% by weight, based upon the weight of the polymer and the crosslinking agent in the adhesive (*reads upon the claimed weight ratio of the crosslinking agent*), in order to further increase the water resistance properties of the adhesive (Abstract; Paragraphs 0030-0045.) Isozaki et al teach that the polyvinylalcohol polymer of the adhesive composition is preferably a modified polyvinylalcohol in order to increase moisture resistance under elevated temperatures and high humidity of the polarizing plate (Paragraph 0031.) Isozaki et al teach that the polyvinylalcohol resin is preferably modified by copolymerization of an alpha olefin, such as ethylene, propylene, butene or isobutene (*isobutylene*) wherein an additional monomer can also be copolymerized with the alpha olefin such as maleic anhydride (*reads upon a modified polyvinyl alcohol resin as well as a resin having a maleic anhydride skeleton in the structure, more particularly a copolymer of maleic anhydride and isobutylene, and hence meets any weight ratio*); wherein the degree of polymerization of the polymer is preferably 100-3000 (Paragraphs 0031-0033; *reads upon claimed molecular weight*.) Isozaki et al also teach that suitable crosslinking agents include epoxy compounds (Paragraph 0042.) Hence, one having ordinary skill in the art at the time of the invention would have been motivated to modify the polyvinylalcohol resin with isobutylene and maleic anhydride, given the limited number of exemplified modifying comonomers, wherein the resulting modified polyvinylalcohol resin copolymerized with these monomers would read upon both resins of the claimed invention, namely the "polyvinyl alcohol resin" and the "copolymer of maleic anhydride and isobutylene".

5. Claims 7, 9-13, 15, and 17-20 are further rejected under 35 U.S.C. 103(a) as being unpatentable over Isozaki et al for the reasons recited above, and in further view of EP'136, in the event the Applicant requires the adhesive to comprise two separate resins. The teachings of Isozaki et al are discussed above and though Isozaki et al teach that the adhesive composition can comprise a modified polyvinylalcohol resin, including one copolymerized with isobutylene and maleic anhydride, Isozaki et al do not specifically teach an adhesive composition comprising a polyvinyl alcohol resin and a separate, different resin comprising isobutylene/maleic anhydride copolymer. However, EP'136 teach that by incorporating a water-insoluble and alkali-soluble/swellable resin such as a copolymer of olefin monomers and carboxylic-group monomers, and more specifically a copolymer of isobutylene with maleic anhydride, into a water-based polyvinylalcohol adhesive composition, improved water resistance of the resulting adhesive can be obtained. Therefore, one having ordinary skill in the art at the time of the invention would have been motivated to further incorporate a separate water-insoluble copolymer of isobutylene and maleic anhydride into the water-based adhesive composition taught by Isozaki et al to further improve the water resistance of the adhesive layer as taught by EP'136.

6. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Isozaki et al alone, or in view of EP'136, and in further view of Suda et al (JP 2005-049779A) or Tanaka et al (USPN 6,905,640) or the admitted prior art. The teachings of Isozaki et al are discussed above. Though Isozaki et al broadly teach that the polarizing film can be dyed with potassium iodide and treated with a boric acid and/or boron compound in order to strengthen adsorption of the color, Isozaki et al do not specifically teach the content of boron or boric acid in the polyvinyl

alcohol film. However, it is well established in the art that the amount of boric acid is a result-effective variable wherein the degree of fixing depends upon the amount of boric acid in the film. Hence, it would have been obvious to one having ordinary skill in the art to utilize routine experimentation to determine the amount of boric acid in the polarizing film to provide the desired fixing properties for a particular end use wherein amounts within the claimed range are typical and obvious in the art, such as the 200-400kg/m³ as taught by Suda et al (Abstract), or the 5-40wt% as taught by Tanaka et al (Col. 4, lines 8-37) or the 13-25wt% as found in conventional, commercially available polarizing films as admitted by the Applicant (Page 5, lines and Page 12, line 28-Page 13, line 2.)

Response to Arguments

7. Applicant's arguments filed 6/5/09 have been fully considered but they are not persuasive. The Applicant has amended the claims to recite "the adhesive consisting essentially of" the polyvinyl alcohol resin, the maleic anhydride copolymer, and the crosslinking agent, and argues that the inorganic layered material taught by Isozaki et al affects the "basic and novel characteristics of the present invention". The Applicant argues that the basic and novel characteristics of the invention are "a polarizer comprising a polarizing element with an adhesive, wherein the adhesive consists essentially of a PVA resin, a resin having a maleic anhydride skeleton in the structure and a crosslinking agent, that has the advantageous effects shown in Test Examples 1 to 3, are achieved without the inorganic layered compound of Isozaki et al." However, the Examiner does not find these arguments persuasive and notes that although the Applicant has found that certain properties can be obtained without the presence of the inorganic layered compound, the Examiner contends that the adhesive composition taught by

Isozaki et al has the same basic and novel characteristics as the claimed invention, namely, a polarizer comprising a polarizing element and an adhesive that provides excellent adhesive properties as well as water resistance and moisture resistance. Considering the Applicant has not met their burden of showing that the introduction of the 1-30wt% layered inorganic taught by Isozaki et al would materially change the characteristics of applicant's invention [see MPEP 2111.03 [R-3]; In re De Lajarte, 337 F.2d 870, 143 USPQ 256 (CCPA 1964). See also Ex parte Hoffman, 12 USPQ2d 1061, 1063-64 (Bd. Pat. App. & Inter. 1989)], the Examiner maintains her position with regards to Isozaki et al and the amended transitional phrase. The Applicant further argues that Isozaki et al do not teach or fairly suggest the advantageous effects that are attained even when the content of boron compound is increased to about 25-40wt% in terms of boric acid content, however, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R. Jackson whose telephone number is 571-272-1508. The examiner can normally be reached on Mondays-Thursdays, 10:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Monique R Jackson/
Primary Examiner, Art Unit 1794
June 22, 2009